

# Social distribution of sexually transmitted diseases

## A survey of female clinic registrations

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**SUMMARY** Social and medical data on 1672 female patients attending a venereal disease clinic were recorded over a four-year period. Analysis of these data provided a demographic and social profile of female clinic attenders and indicated considerable variations in patterns of diagnosis between different social categories of patients. The probability of diagnosis of different infections varied according to age, marital state, social class, employment status, and previous record of attendance.

### Introduction

Surveys of patients attending venereal disease clinics at the Hull Royal Infirmary were undertaken during the period 1970-74 to investigate the social distribution of sexually transmitted diseases on Humberside. An earlier paper presented an analysis of a three-year sample of male clinic registrations (Heywood and Bacon, 1975). The results of this study are derived from a survey of female registrations during the period from 1 January 1970 to 31 December 1973.

### Patients and methods

All new, post-pubertal cases presenting in UK residents during the survey period were included. Cases presenting in foreign residents visiting the UK for periods of up to one month were excluded. Personal and medical data, including the patient's age, marital state, occupational background, suspected source of infection, medical and sexual history, and conditions diagnosed were recorded for each new case registered. Registrations were categorised under five diagnoses: syphilis, gonorrhoea, non-specific genital infection, nil, and 'other conditions'; 'other condition(s)' refers to conditions requiring treatment in the clinic. All data were processed for computer analysis, which was carried out with the aid of an SPSS programme in the University of Hull computer centre.

### Results

#### AGE DISTRIBUTION

The age distribution of the total number of registrations is shown in the Figure. The rapid upturn leading to a sharp peak in the late teens was followed by an almost equally rapid decline in numbers during the early 20s when the marriage rate is at its highest. The median age of patients was 21·5 years.

#### AGE AND MARITAL STATE

The distribution of registrations by age and marital state is shown in Table 1. The high proportion of registrations in the separated/divorced category among patients aged 25 and over is noteworthy.

Of the 387 cases presenting in married women living with their husbands, the husband was cited as the suspected source of infection in 277 (72%) cases. Husbands were also cited in 23 cases presenting in separated wives. Twenty-six cases among patients in the age range 15-22 who were pregnant at the time of examination are included in the number given in the single/childless category (Table 1).

#### DIAGNOSES

The annual distribution of diagnoses and the overall pattern is given in Table 2. The total number of diagnoses of gonorrhoea (628) included approximately 15-20% which were diagnosed on epidemiological evidence only.

#### AGE AND DIAGNOSIS

The distribution of diagnoses in different age groups is shown in Table 3. More than one-third (35·8%) of

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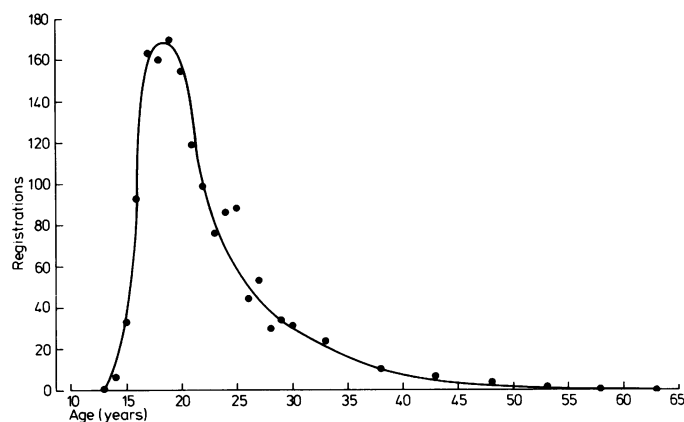


Figure Age distribution of 1672 female registrations (1970-3)

Table 1 Age and marital state

Age	Marital state										Total no. of registrations	% of total registrations
	Single, childless		Unmarried mother		Married		Separated or divorced		Widowed			
	No.	%	No.	%	No.	%	No.	%	No.	%		
<20	538	85.9	28	4.5	32	5.1	28	4.5	0	0	626	37.4
20-24	278	52.1	55	10.3	122	22.8	79	14.8	0	0	534	31.9
25-29	42	17.0	16	6.4	105	42.3	81	32.7	4	1.6	248	14.8
30-39	15	7.5	9	4.5	89	44.7	81	40.7	5	2.5	199	11.9
40-49	1	2.0	2	3.9	31	60.8	16	31.4	1	2.0	51	3.1
50+	1	7.1	0	0	8	57.1	2	14.3	3	21.4	14	0.8
Total	875	52.3	110	6.6	387	23.1	287	17.2	13	0.8	1672	100.0

Table 2 Registrations and diagnoses by year (1970-73)

Year	Diagnosis										Total no. of registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil		
	No.	%	No.	%	No.	%	No.	%	No.	%	
1970	11	3.7	118	39.6	31	10.4	38	12.7	111	37.2	298
1971	8	1.9	167	39.0	52	12.1	48	11.2	166	38.8	428
1972	4	0.8	173	36.5	85	17.9	50	10.5	174	36.7	474
1973	1	0.2	170	36.0	55	11.6	45	9.5	210	44.5	472
Total	24	1.4	628	37.6	223	13.3	181	10.7	661	39.5	1672

Table 3 Age and diagnosis

Age	Diagnosis										Total no. of registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil		
	No.	%	No.	%	No.	%	No.	%	No.	%	
<20	6	1.0	225	35.9	73	11.7	91	14.5	254	40.6	626
20-24	6	1.1	205	38.4	86	16.1	49	9.2	200	37.4	534
25-29	7	2.8	115	46.4	31	12.5	20	8.1	81	32.7	248
30-39	5	2.5	70	35.2	31	15.6	16	8.0	81	40.7	199
40 +	0	0	13	20.0	2	3.1	5	7.7	45	69.2	65
Total	24		628		223		181		661		1672

all the cases of gonorrhoea were diagnosed among teenagers, including 12 cases in 15-year-olds. This is marginally above the corresponding national figure of 33.7% for the survey period calculated from the annual reports of the Chief Medical Officer (Department of Health and Social Security, 1970-73).

#### MARITAL STATE AND DIAGNOSIS

The patterns of diagnosis for the different marital states are shown in Table 4. The incidence of gonorrhoea was higher among separated/divorced patients and unmarried mothers than among married women living with their husbands and was lowest among single, childless patients. Conversely, non-specific genital infection (NSGI) was diagnosed less frequently among separated/divorced patients and unmarried mothers than among married or single, childless patients.

#### SOCIAL CLASS AND DIAGNOSIS

Variations in social class in patterns of diagnosis are shown in Tables 5 and 6. The unemployed were classified on the basis of previous occupation and married women according to their husbands' occupations (Office of Population Censuses and Surveys, 1970). The figures indicated a higher incidence of gonorrhoea and syphilis and a lower incidence of NSGI among social classes IV and V than among patients whose occupations (or whose husbands' occupations) were in classes I and II.

#### EMPLOYMENT STATUS AND DIAGNOSIS

Patterns of diagnosis in relation to the employment status of patients are shown in Table 7. All those describing themselves as 'unemployed' or as a 'housewife' were assigned to these categories, which included patients in all marital state categories.

Table 4 *Marital state and diagnosis*

Marital state	Diagnosis										Total no. of registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Single, childless	9	1.0	272	31.1	119	13.6	116	13.3	380	43.4	875
Unmarried mothers	3	2.7	50	45.4	14	12.7	10	9.1	36	32.7	110
Married	8	2.1	161	41.6	66	17.0	35	9.0	129	33.3	387
Separated/divorced	4	1.4	139	48.4	24	8.4	18	6.3	111	38.7	287
Widowed	0	0	6	46.1	0	0	2	15.4	5	38.5	13
Total	24		628		223		181		661		1672

Table 5 *Social class and diagnosis*

Social class	Diagnosis										Total no. of registrations	% of total registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil			
	No.	%	No.	%	No.	%	No.	%	No.	%		
I higher professional	0	0	3	37.5	1	12.5	0	0	4	50.0	8	0.5
II lower professional	0	0	35	27.3	26	20.3	14	10.9	53	41.4	128	7.7
III(N) skilled non-manual	4	1.0	137	34.9	56	14.2	49	12.5	154	39.2	393	23.5
III(M) skilled manual	2	1.1	87	46.3	25	13.3	22	11.7	58	30.8	188	11.2
IV semi-skilled	9	2.8	134	41.7	36	11.2	34	10.6	119	37.1	321	19.2
V unskilled	7	2.8	131	51.6	23	9.0	26	10.2	80	31.5	254	15.2
Unclassified registrations*											380	22.7
Total											1672	100.0

\*This includes students, schoolgirls, H.M. Forces and inadequately described occupations/husbands' occupations

Table 6 *Patterns of incidence of gonorrhoea and NSGI and social class variations in selected categories*

Social class	All registrations			Separated/divorced			Unemployed		
	No.	% with gonorrhoea	% with NSGI	No.	% with gonorrhoea	% with NSGI	No.	% with gonorrhoea	% with NSGI
I, II, and III(N)	529	33.1	15.7	91	46.2	12.1	58	36.2	10.3
III(M), IV, and V	763	46.1	11.0	171	50.3	5.8	108	61.1	3.7
Unclassified	380			25			20		
All classes	1672	37.6	13.3	287	48.4	8.4	186	52.7	5.9

Table 7 *Employment status and diagnosis*

Employment status	Diagnosis										Total no. of registrations	% of total registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil			
	No.	%	No.	%	No.	%	No.	%	No.	%		
Employed	5	0.6	272	34.5	117	14.8	103	13.1	316	40.1	789	47.2
Unemployed	7	3.8	98	52.7	11	5.9	20	10.8	57	30.6	186	11.1
Housewives	12	2.7	214	48.0	55	12.3	29	6.5	147	33.0	446	26.7
Students	0	0	24	13.8	36	20.7	20	11.5	97	55.7	174	10.4
Schoolgirls	0	0	20	26.0	4	5.2	9	11.7	44	57.1	77	4.6
Total	24		628		223		181		661		1672	100.0

The incidence of gonorrhoea and of syphilis was highest among those describing themselves as unemployed. The distribution of diagnoses in students resembled that of social classes II and III rather than that of social classes IV and V; this contrasts with the general pattern in the corresponding age group.

#### MEDICAL HISTORY AND DIAGNOSIS

Patients previously examined in the clinic, or at other clinics, were classified as 'repeaters'; others were classified as 'new patients'. Patterns of diagnosis in these categories are shown in Table 8.

#### Discussion

Little systematic evidence is available on the social distribution of sexually transmitted diseases in the UK. The results of this study suggest that women in certain social categories may be particularly vulnerable to sexually transmitted infections. They also illustrate definite differences in the social distribution of different infections among clinic patients.

#### MARRIAGE BREAKDOWN

The number of cases presenting in separated or divorced women amounted to nearly three-quarters (74.2%) of the number presenting in married patients living with their husbands. Separated or divorced women accounted for 17.2% of total registrations; this compares with 9% of male

registrations accounted for by patients in this category during a parallel survey of cases examined in the Hull men's clinic (Heywood and Bacon, 1975). Interestingly, the results of other clinic surveys suggest that separated and divorced patients may, in general, account for a higher proportion of female than of male clinic cases (Pemberton *et al.*, 1972; Satin and Mills, 1978).

#### UNEMPLOYMENT

'Unemployed' patients accounted for 11.1% of cases examined and for 16.1% of total diagnoses of syphilis and gonorrhoea. High levels of unemployment among female patients with infectious syphilis and gonorrhoea have been recorded elsewhere (Satin and Mills, 1978). The average monthly rate of female unemployment (as calculated by the Department of Employment) amounted to between 1% and 2% in the north Humberside area in each year of the survey period, although the rate among teenagers may have been somewhat higher (Department of Employment, 1970-73).

#### SOCIAL CLASS PATTERNS OF DIAGNOSIS

Social class differences in patterns of diagnosis among clinic patients have been recorded previously. In particular, gonorrhoea occurs more frequently, and NSGI less frequently, in lower social classes than in higher social classes (Pemberton *et al.*, 1972; Heywood and Bacon, 1975). This study confirms these findings, although the class differences were

Table 8 *Medical history and diagnosis*

Medical history	Diagnosis										Total no. of registrations	% of total registrations
	Syphilis		Gonorrhoea		NSGI		Other condition(s)		Nil			
	No.	%	No.	%	No.	%	No.	%	No.	%		
New patients	12	0.9	474	36.5	177	13.6	147	11.3	526	40.5	1300	77.8
Repeaters	12	3.2	154	41.4	46	12.4	34	9.1	135	36.3	372	22.2
Total	24		628		223		181		661		1672	100.0

less marked than the corresponding differences among patients examined in the Hull men's clinic (Heywood and Bacon, 1975).

An approximately inverse relationship between the incidence of gonorrhoea and of NSGI was evident not only between social classes but between other demographic and social categories of patients. These distributions cannot be adequately accounted for in terms of the social class distribution of patients between these categories. Unemployment and marriage breakdown were associated with a higher incidence of gonorrhoea at each social level. Similarly, diagnoses of NSGI were less frequent among separated/divorced and unemployed patients than among others in the same social class.

#### GONORRHOEA AND NSGI

While the social distribution of gonorrhoea can be interpreted in terms of the extent of promiscuity and the social character of consorts, variations in the incidence of NSGI seem to require a quite different explanation. In this study NSGI was diagnosed mainly by inference in contacts of men with non-specific urethritis (NSU). 'Psychological factors' have been referred to in the symptomatology of NSU in male patients (Evans, 1978). Whatever the nature of the variables predisposing to this condition, they

appear to be predominantly associated with professional and white-collar occupations and inversely related to some of the variables predisposing to infection with gonorrhoea.

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